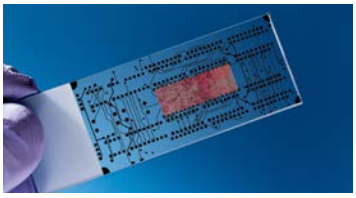
B 270® i Ultra-White Glass

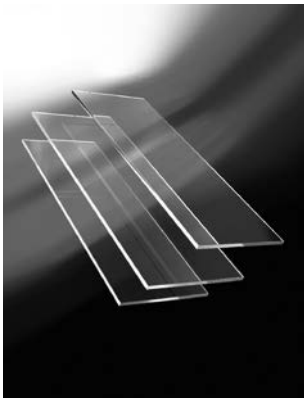
Product Information

SCHOTT offers B 270® i crown glass in sheet form, suitable for a variety of different applications such as biotech, consumer and industrial optics.

B 270® i glass is manufactured by using a special up-draw process developed by SCHOTT. Raw materials with a low iron oxide content ensure an ultra-white appearance.

The crown glass is available in a wide thickness range of 0.9 mm to 10.0 mm and various stock formats. Customized formats and processing can be offered upon request.





Features and Benefits

- Constantly high transmittance across a wide spectrum
- Ultra-white appearance and optical clarity (no iron absorption edge vs. Soda Lime glass)
- Tight, homogenous refractive index
- High solarization stability and chemical resistance
- Fire polished surfaces in drawn target thicknesses without additional polishing
- Certified biocompatibility
- Easy to process

Potential Applications

Biotech

B 270® i is perfectly suited for biotech applications due to its high transmittance, ultra-white appearance and its certified biocompatibility.

- Lab-on-a-chip
- Laboratory & coating substrates

Consumer & Industrial Optics

Applications in consumer & industrial optics require glass with good solarization stability, high transmittance and cost-efficient processing.

- Optical filters for photography
- 3D polarizer glass
- Display & touch cover
- Action camera case
- Consumer glasses and goggles

Technical Data	
Dimensions	1680 mm x 900 mm, 900 mm x 840 mm, 406 mm x 258 mm other formats upon request
Standard thicknesses	0.9, 1.0, 1.65, 2.0, 2.3, 2.5, 3.0, 3.5, 4.0, 5.0, 10.0 mm other thicknesses upon request

Mechanical properties		
Density ρ	in g/cm³	2.56
Young's modulus E	in kN/mm²	71,1
Poisson's ratio μ		0.22
Torsion modulus G	in kN/mm²	29
Knoop hardness	*HK* 0.1/20	500
Vickers hardness	*HV* 0.2/25	510

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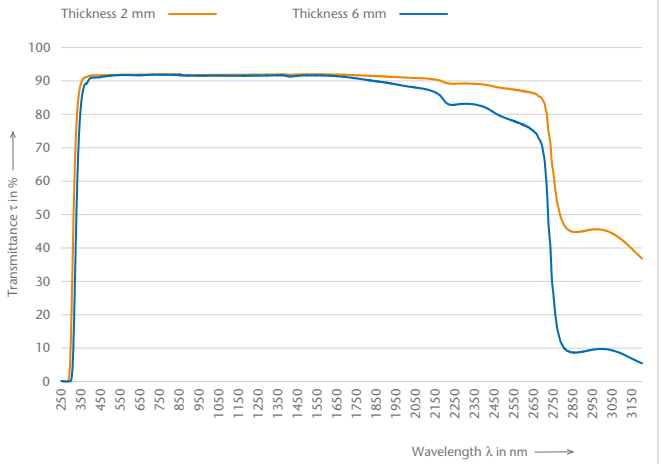
Thermal properties		
CTE (Coefficient of thermal expansion) α	in $10^{-6} \cdot K^{-1}$ (20 °C; 300 °C)	9.4
Transformation temperature T_g	in °C	542
Mean specific heat capacity c_p	in J/(g·K) (20 °C to 100 °C)	0.8
Viscosities	Viscosity lg η in dPas	Temperature ϑ in °C
Strain point	14.5	507
Annealing point	13.0	535
Softening point	7.6	711

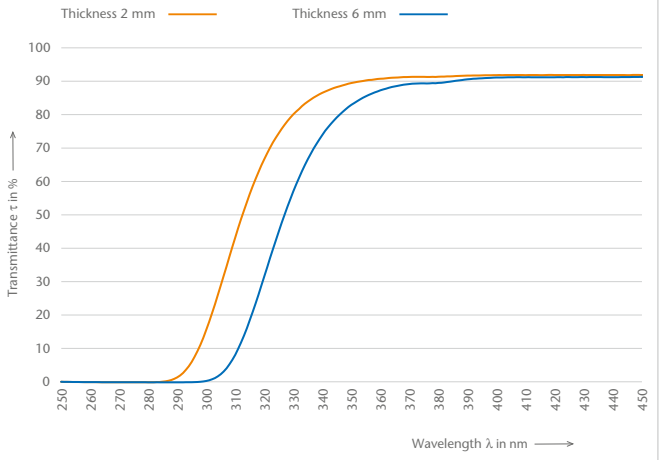
Optical properties		
Refractive indices Pretreatment of samples Condition as supplied ["as drawn"]	n_g	1.5341
	$n_{F'}$	1.5297
	n_F	1.5292
	n_e	1.5251 ± 0.001
	n_d	1.5230
	n_D	1.5229
	$n_{C'}$	1.5207
	n_C	1.5203
Abbe value	v_e	58.3 ± 0.6

Electrical properties		
Dielectric constant ε_r	at 1 GHz	6.7
Dissipation factor tan δ	at 1 GHz	$59 \cdot 10^{-4}$

Chemical properties		
Hydrolytic resistance (acc. to DIN ISO 719)	Class	HGB 3
	Equivalent of alkali per gram glass grains in µg/g	136
Acid resistance (acc. to DIN 12116)	Class	S 2
	Half surface weight loss after 6 hours in mg/dm²	0.7
Alkali resistance (acc. to DIN ISO 695)	Class	A 1
	Surface weight loss after 3 hours in mg/dm²	71

Spectral transmittance
(λ = 250 nm to 3200 nm and 250 nm to 450 nm)





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